B4

Detailed Description of the Invention --.

Page 40, lines 13-29, delete in their entirety.

Page 41, lines 1-30, delete in their entirety.

Page 42, lines 1-30, delete in their entirety.

Page 43, lines 1-28, delete in their entirety.

**IN THE CLAIMS**

Cancel without prejudice claims 1-33 and substitute therefor the following new claims:

-- 34. An isolated nucleotide sequence comprising the nucleotide sequence according to SEQ ID No. 1, 2, 3, 4, 5, 10, 12, 13, or 15.

SUB D

35. An isolated nucleotide sequence which encodes a polypeptide comprising the amino acid sequence according to SEQ ID No. 6, 7, 8, 9, 11 or 14.

36. A fragment of the nucleotide sequence according to claim 34 and which gives a W chromosome specific signal upon hybridisation to genomic DNA of a non-ratite bird.

B5

37. A fragment of the nucleotide sequence according to claim 35 and which gives a W chromosome specific signal upon hybridisation to genomic DNA of a non-ratite bird.

38. The fragment according to claim 36, which is obtained by restriction endonuclease digestion.

39. The fragment according to claim 37, which is obtained by restriction endonuclease digestion.

40. The fragment according to claim 36, wherein the non-ratite bird is selected from chicken, turkey, duck and parrot.

41. The fragment according to claim 37, wherein the non-ratite bird is selected from chicken, turkey, duck and parrot.

42. An isolated nucleotide sequence which hybridises under moderate to high stringency conditions to the nucleotide sequence according to claim 34.

43. An isolated nucleotide sequence which hybridises under moderate to high stringency conditions to the nucleotide sequence according to claim 35.

44. The nucleotide sequence according to claim 42, which gives a W chromosome specific signal upon hybridisation to genomic DNA of a non-ratite bird.

45. The nucleotide sequence according to claim 43, which gives a W chromosome specific signal upon hybridisation to genomic DNA of a non-ratite bird.

46. The fragment according to claim 44, wherein the non-ratite bird is selected from chicken, turkey, duck and parrot.

47. The fragment according to claim 45, wherein the non-ratite bird is selected from chicken, turkey, duck and parrot

48. A method for determining the sex of a non-ratite bird or of an embryo, fetus, cell or tissue of a non-ratite bird, which comprises:
hybridising under moderate to high stringency conditions a nucleic acid according to claim 34 or 35 with either

(a) DNA or RNA of the non-ratite bird, embryo, fetus, cell or tissue thereof or,

(b) cDNA reverse transcribed from RNA of the non-ratite bird, embryo, fetus, cell or tissue thereof of, or

(c) cDNA or DNA amplified by cloning or polymerase chain reaction from DNA or RNA of the non-ratite bird, embryo, fetus, cell or tissue thereof, and detecting the presence or absence of hybridisation of the nucleic acid to (a), (b) or (c), which result is indicative of the sex of the non-ratite bird, embryo, fetus, cell or tissue thereof.

49. A method for determining the sex of a non-ratite bird or of an embryo, fetus, cell or tissue of a non-ratite bird, which comprises:
hybridising under moderate to high stringency conditions a nucleic acid according to claim 42 or 43 with either

(a) DNA or RNA of the non-ratite bird, embryo, fetus, cell or tissue thereof or,

(b) cDNA reverse transcribed from RNA of the non-ratite bird, embryo, fetus, cell or tissue thereof of, or

(c) cDNA or DNA amplified by cloning or polymerase chain reaction from DNA or RNA of the non-ratite bird, embryo, fetus, cell or tissue thereof, and detecting the presence or absence of hybridisation of the nucleic acid to (a), (b) or (c), which result is indicative of the sex of the non-ratite bird, embryo, fetus, cell or tissue thereof.

~~50. An avian CHD-protein, fragment thereof or polypeptide~~ containing a CHD-~~gene of~~ part thereof or a CHD-mimetope protein, fragment thereof or a CHD-mimetope ~~polypeptide~~ which is derived or derivable from the isolated nucleotide sequence ~~of claim 34 or 35.~~